Norman H. Bangerter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

November 2, 1988

TO: Lowell Braxton

FROM: Scott Johnson

RE: White River Shale Project, Tracts Ua and Ub

The BLM held a meeting in the Vernal District Office on October 31, 1988. The meeting was set up to review the progress on the property transfer of Tracts Ua and Ub.

State Lands proposed a property exchange earlier this year that would have given sections totaling about 12,500 acres to the BLM in exchange for Tracts Ua and Ub, which encompass 10,240 acres. The BLM has rejected the exchange. The BLM does not believe the proposed exchange lands are of equal mineral value.

Pat Spurgin wants us to review the BLM reclamation estimate of $715,000. He also wants to know if the mine could be closed in the interim to defray costs. BLM currently spends about $3000/month for electricity alone.

The BLM currently has the ventilation fan shut off. The warm outside air provides natural ventilation for the mine. Gary Hunter, BLM, claims an air flow of 50 fpm during the day. If the State acquires the property, the fan would have to be turned on while people are underground. Natural ventilation is unreliable and cannot be considered for the safe operation of pumping and maintenance.

I will prepare a revised DOGM reclamation estimate for State Lands. I will also outline, with costs, the options of temporary mine closures.

Gary Hunter is in charge of arranging mine tours. John Blake is also interested in going underground. I will arrange a November 15 underground mine tour with Gary Hunter.

jb
MN17/13

INFORMATION FOR MEETING ON

STATE EXCHANGE FOR Ua and Ub OIL SHALE TRACTS

October 31, 1988

Oil Shale Exchange Meeting
October 31, 1988

David Little	District Manager, BLM, Vernal
Ronald E MADSEN	Senator Hatch
BOB WEIDNER	USS FAKE GARN
Jim Reidhead	CO. COMM.
Nyle Bigelow	Uintah county comm.
GARY McCLELLAN	" " "
John Wardell	
Ron Crittenden	" " "
JIM PIANI	Congressman Howard Nielson
MIKE LEKAS	MINERALS SUPERVISOR, BCRA, VERNAL DISTRICT
Scott Johnson	GEOKINETICS INC.
Howard Cleavinger	State Division of Oil, Gas, Mining
Randy Heuscher	Vernal District Office
GARY R. HUNTER	Utah State Office, BLM
KENT CORON	VERNAL DISTRICT, BLM
PAT SPURGIN	BLM SALT LAKE
	ST. OF UTAH

ISSUES TO BE DISCUSSED AT METTING ON STATE EXCHANGE
FOR OIL SHALE TRACTS Ua AND Ub
October 31,1988

POTENTIAL FOR CONTROVERSY/PROTEST

TIMING

INDIAN ISSUE RELATIVE TO STATE TITLE

ADEQUACY OF TECHNICAL DATA

NEW ALTERNATIVES?

BONUS BIDS

OIL SHALE CLAIMS

ENGINEERING AND SEALING OF ACQUIFERS

OIL AND GAS LEASES

STATE'S/LEKAS' INTENTIONS IF THE EXCHANGE IS COMPLETED

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

ACTION PLAN
Ua/Ub STATE EXCHANGE 10/28/88

Responsible office	Day	Action
State of Utah	1	Submission of acceptable land exchange proposal (preliminary values between offered and selected lands are equal).
District Mgr	20	Publication of Notice of Intent to Plan in Federal Register (FR) and local newspaper.
District Mgr	50	End of comment period on Notice of Intent.
District Mgr	70	Publication of Notice of Proposed Decision in FR and local newspapers.
District Mgr	100	End of protest period on Proposed Decision.
District Mgr	120	Publication of Notice of Realty Action (NORA) in FR and local newspapers.
District Mgr	130	End of Governor's consistency review
District Mgr	165	End of Protest period on NORA.
State Dir	180	Issue patent to public lands.

WHITE RIVER OIL SHALE PROJECT

COSTS PER FISCAL YEAR

The following costs were incurred in Fiscal Year 1987:

1. Salary/Benefits.....$46,400
2. Utilities.....$34,000
3. Travel/ Tran./ Supplies.....$19,400

TOTAL.....$99,800

The following costs were incurred in Fiscal Year 1988 up to 08-31-88:

1. Salary/Benefits.....$39,000
2. Utilities.....$25,800
3. Travel/Tran./Supplies.....$14,800

TOTAL.....$79,600

The following costs are planned in Fiscal Year 1989:

1. Salary/Benefits.....$37,800
2. Utilities.....$30,000
3. Travel/Tran./Supplies.....$15,000

TOTAL.....$82,800

SUMMARY OF
PROTOTYPE OIL SHALE
TRACTS U_A - U_B

WHITE RIVER SHALE OIL CORP.: PHILLIPS PETROLEUM, SOHIO, SUN OIL.

LEASED: 1974.

BONUS BID: $120.7 MILLION.

TOTAL ACRES: 10,240.

TOTAL RESERVES (IN PLACE): 1.05 BILLION BARRELS OF OIL.

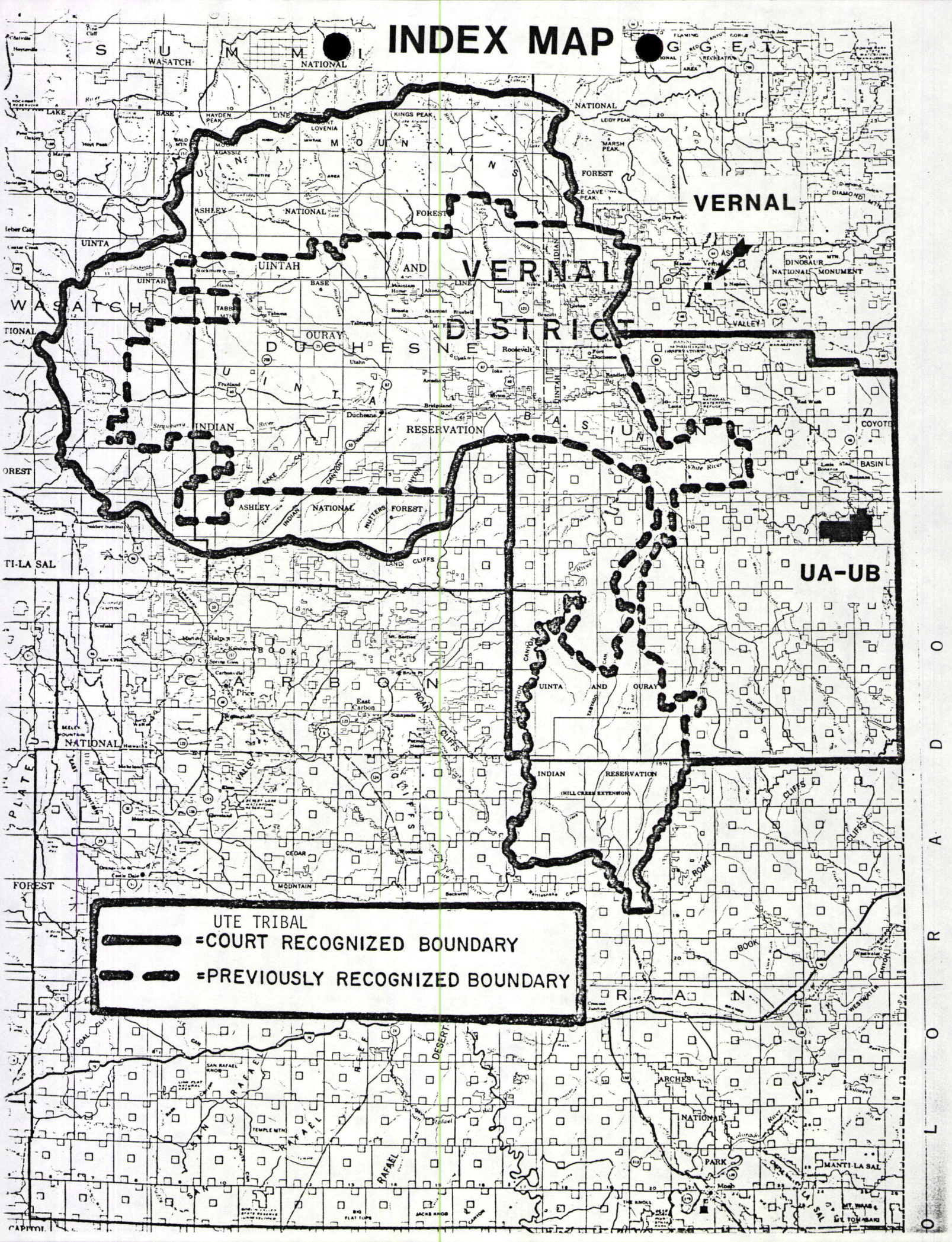
RECOVERABLE RESERVES: 661.5 MILLION BARRELS OF OIL.

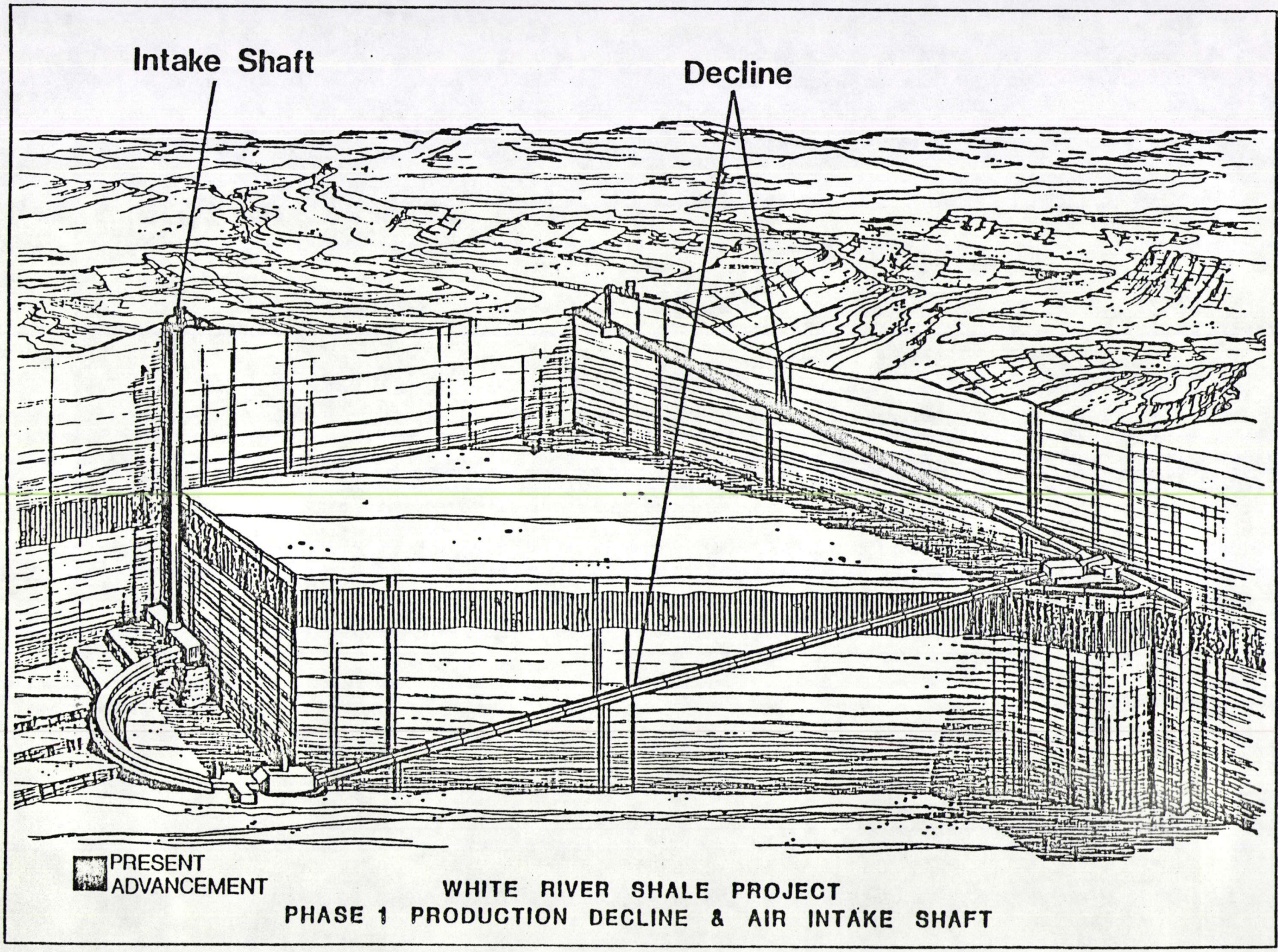
DEPTH TO OIL SHALE: 300 FEET TO 1250 FEET.

OIL SHALE MINING ZONE: 55 FEET THICK AT A GRADE OF 28 GALLONS PER

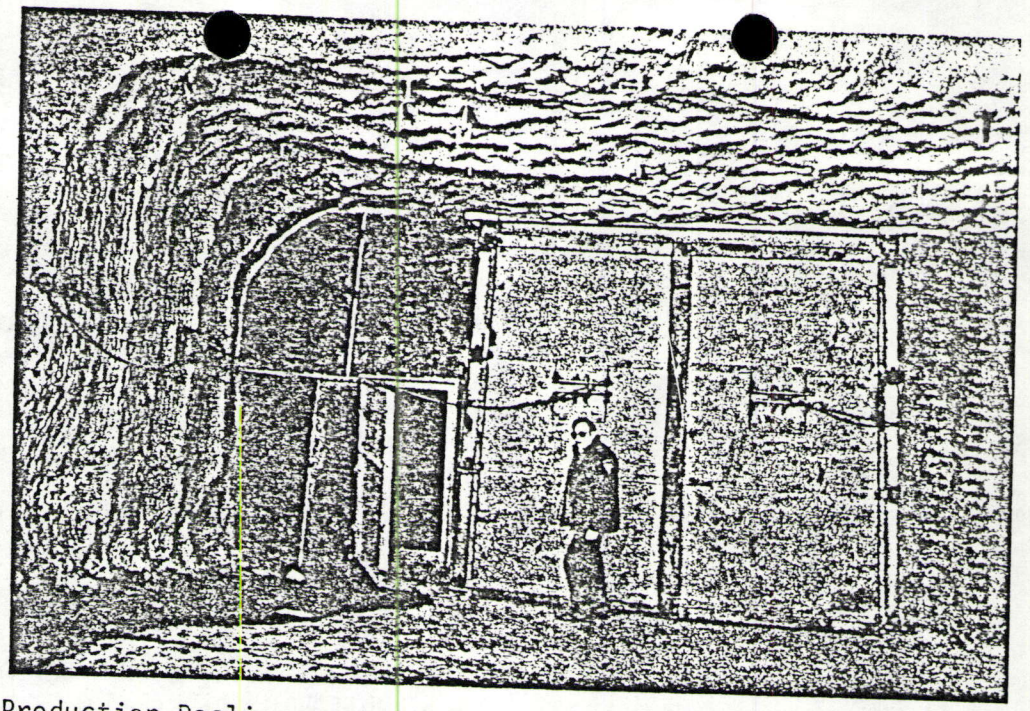
PROJECTED OIL PRODUCTION (1ST PHASE): 15,000 BARRELS PER DAY.

PROJECTED OIL PRODUCTION (MINE CAPACITY): 106,000 BARRELS PER DAY


INDEX MAP
VERNAL
UINTAH AND OURAY INDIAN RESERVATION
VERNAL DISTRICT
UA-UB
UTE TRIBAL
=COURT RECOGNIZED BOUNDARY
=PREVIOUSLY RECOGNIZED BOUNDARY
COLORADO



WHITE RIVER SHALE PROJECT
PHASE 1 PRODUCTION DECLINE & AIR INTAKE SHAFT



Production Decline

The primary mine access at this time is via the production declines. Decline "A" is 28.5 ft. wide by 12.5 ft in height, approximately 2,000 ft. long and has a slope of 23.75%. Decline "B" is 18.5 ft. wide by 12.5 ft. high, approximately 330 ft. long and was mined as a travel way between declines "A" and "C". Decline "C" is 18.5 ft. wide by 12.5 ft. high, approximately 2,500 ft. long and has a 26.8% slope.

A 4160v powerline runs down the "A" decline to a 500 KVA 4160/480/277 transformer at the "A"/"C" intersection. The transformer supplies power for lights on all three declines.

Approximately 1.5 gpm of water seeps from the Birds Nest aquifer into the "C" decline. The water is collected in a sump and pumped to the surface with a 20 hp 50 gpm Gardner-Denver pump. The pump discharge line runs up the "C" decline into the "B" decline and up a raise to the surface.

Intake Shaft

The intake shaft is 30 ft. in diameter, concrete lined and 1058 ft. deep. The shaft is basically dry but approximately 0.5 gpm of seepage causes ice formation problems in the cold months. It is equipped with rope guides for an eight man conveyance, a 15 KV bore hole cable for mine power and a 25 pair communications cable.

Mine Excavations

A limited number of drifts were driven in and below the mining horizon to connect the shaft and decline, and for testing purposes.

The test room is a 55 ft. wide, 330 ft. long excavation, 10 ft. high. the roof is about 4 ft. below the mahogany marker. It has been instrumented to monitor the behavior for the immediate roof in supported and unsupported areas.

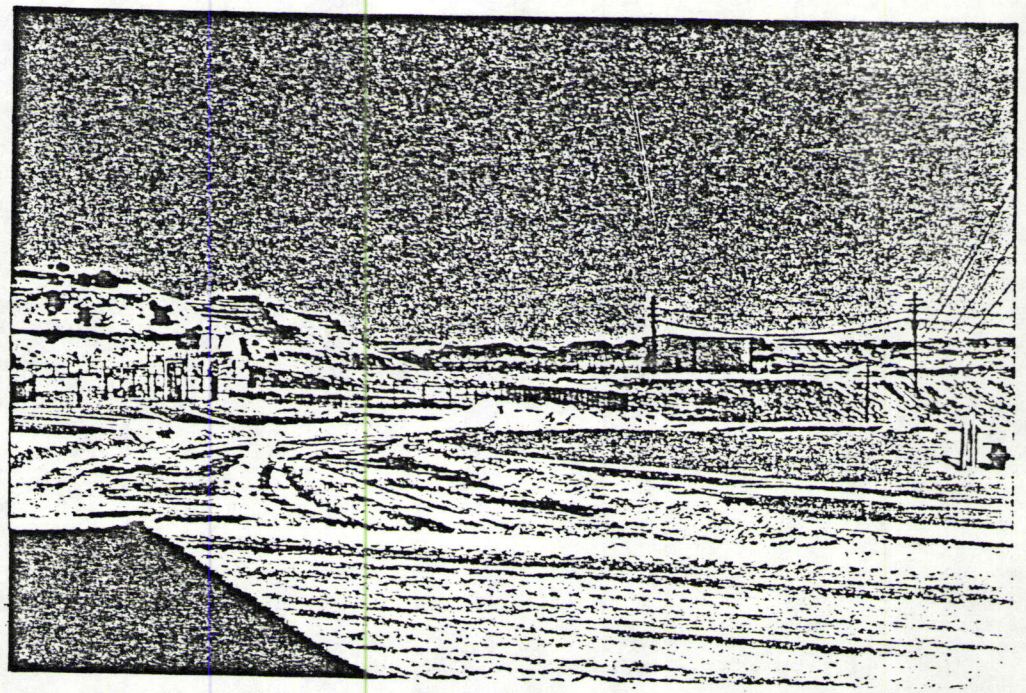
Mine Excavation (cont'd)

The secondary crusher discharge chamber is approximately 100 ft. below the mining zone and is at the end (or bottom) of the "C" decline. A very heavy crude oil is seeping into this area, along with a minor amount of water, from surrounding strata at approximately 300 gal. per day. This oil/water mixture requires periodic pumping and off-site disposal.

All of the mine excavations are lighted. Mine power is distributed from a 500 KVA 13.8 KV/480/227 transformer in the shaft station, connected through a vacuum switch to the bore hole cable in the intake shaft.

The mine ambient air is monitored by three carbon monoxide and four methane sensors stratigically located in return air splits. The sensor output is displayed and recorded at a computer terminal located in the mine services building.

There are mine phones in three underground locations, the shaft collar, hoist house and mine service building.



Fenced-In Sewage Treatment Plant (left)
and Electrical Switch Gear Building (right)

Electrical Power Distribution System

The incoming power from Moon Lake Electrical Association is 13.8 KV to the surface mine substation and power is distributed to four plant site areas at this voltage.

Outside the Mine Service Building (MSB) is a 750 KVA 13.8 KV/480/277 transformer which feeds the electrical equipment room in the MSB. From here power is supplied to the MSB, the Water Treatment Plant, and the Sewage Treatment Plant.

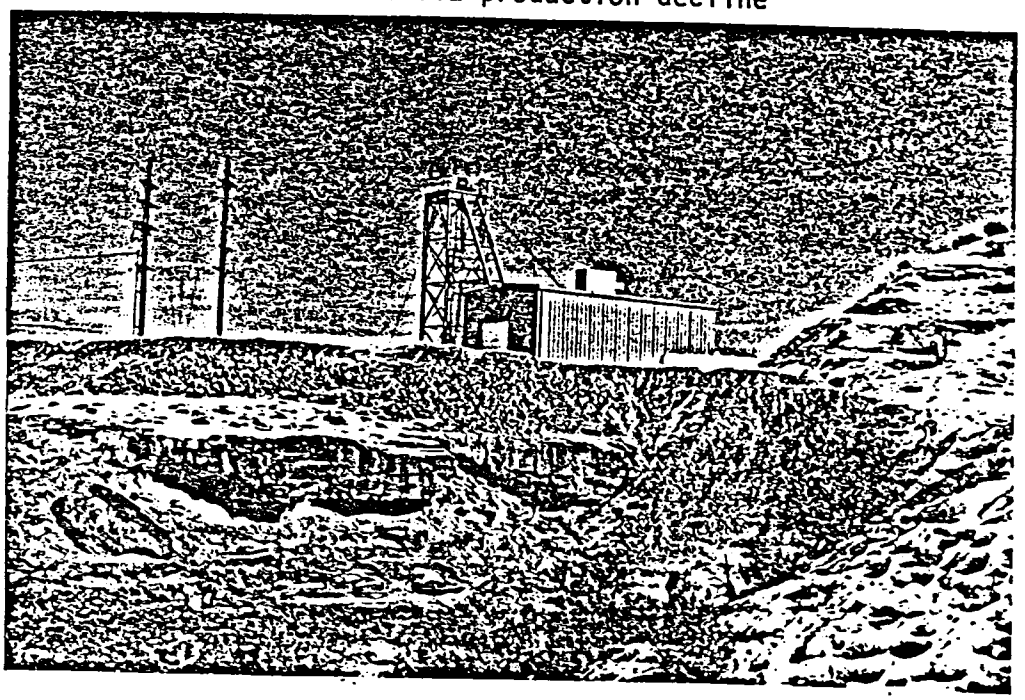
A 750 KVA 13.8 KV/480v transformer is located near the collar of the intake shaft. The transformer supplies the hoist house and local area. At the transformer location a junction is made with the 15 KV bore hole cable in the intake shaft that provides 13.8 KV power to the mine.

Two transformers are located at the decline portal area. A 100 KVA 13.8 KV/480/277 tranformer supplies power for local lighting and the airlock doors hydraulic system. A 1000 KVA 13.8 KVA/416v transformer supplies the decline exhaust fan and a cable in decline "A" to an underground lighting transformer.

13.8 KV service is also provided to the water wells and security post where it is stepped down by local transformers.

The on-site electrical power system includes approximately five miles of 13.8 KV transmission and distribution lines.

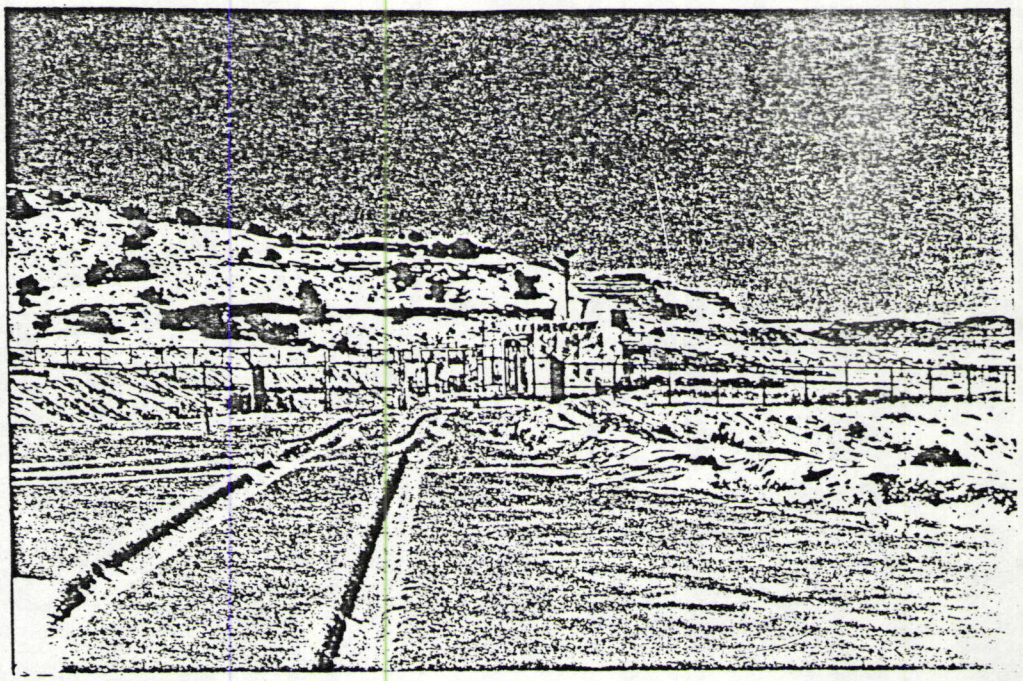
Mine access via production decline



Mine Hoist and Headframe

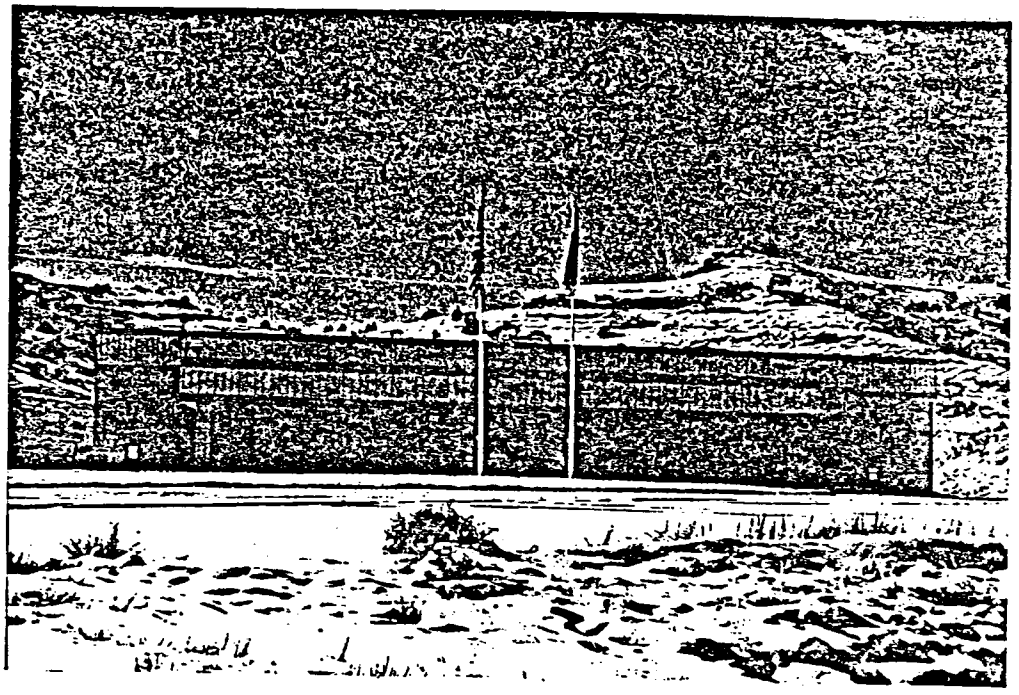
Hoist and Headframe

The intake shaft hoist is a Webster, Camp and Lane, 250 hp. 5 ft. dia. single drum winder and is housed in a 1,000 sq. ft. building. The headframe is approximately 45 ft. high and also supports rope guides for the eight man conveyance.



Fenced-In Sewage Treatment Plant

The Clow-RBC process plant has a 15,000 gal. per day capacity. The plant, although completed, was never put into operation due to the project suspension and insufficient feed to keep the biomass active. Effluent from the mine services building is stored in the plant holding tank and periodically removed by a sanitation contractor.



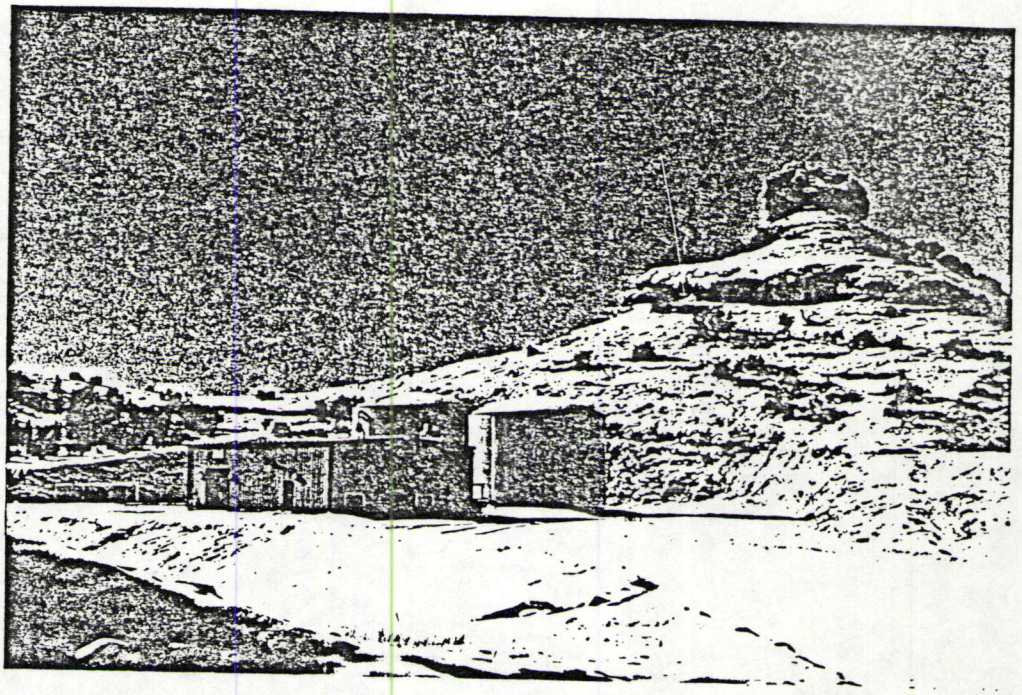
Front View of Office and Mine Service Building

Mine Services Building

The Mine Services Building contains the office, storage, and warehouse facilities for the existing site. The front office area is 4,650 sq. ft., has 12 private offices, one general office, one conference room, and a repo. room with storage.

The center section of the building houses the boiler room, communications room, electrical equipment room, and the men's and women's locker rooms. This section also contains two, 2,000 sq. ft. of storage areas, one of which is subdivided into a 800 sq. ft. fire protected room.

The back section of the building is a 13,800 sq. ft. heated warehouse and shop. It has a 16 x 12 overhead door and loading dock.

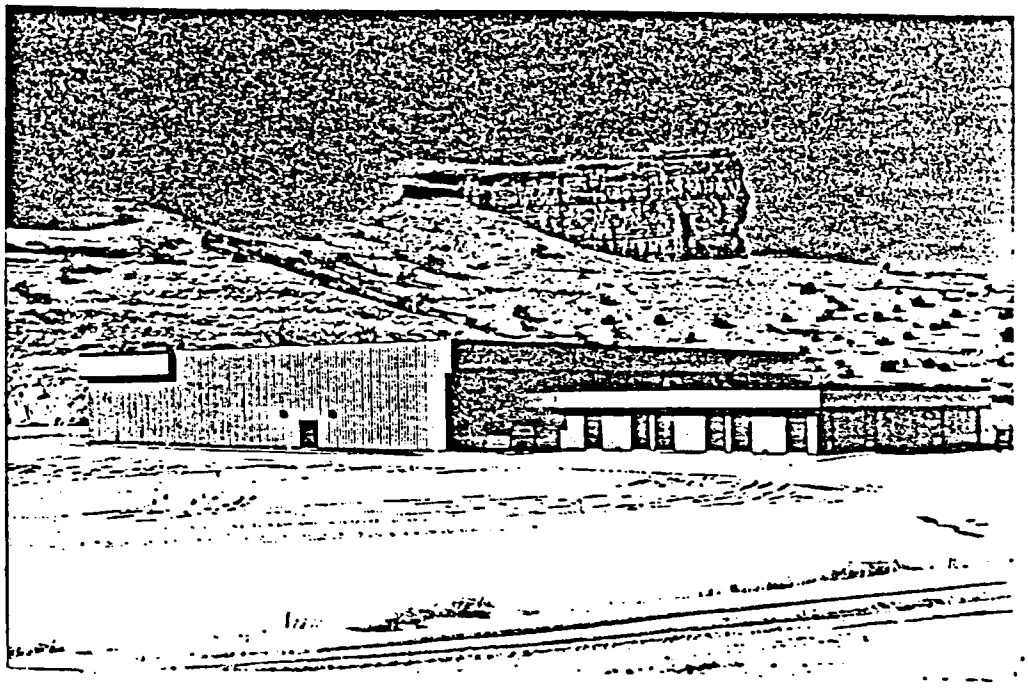


Water Treatment Plant

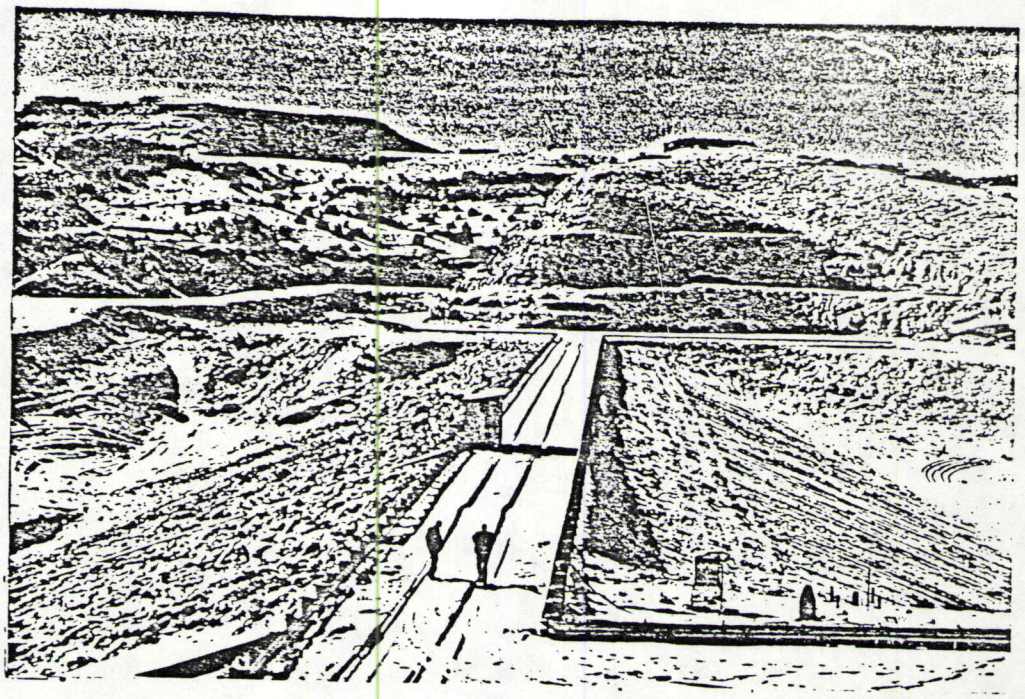
Treatment area features two storage tanks. The 150,000 gal. raw water tank is equipped to receive water hauled by truck from the alluvial wells. The potable water tank has a 180,000 gal. capacity, 80,000 gal. for general use and a 100,000 gal. fire water reserve.

The Refinite Series 79 water treatment plant has a 90 gpm rating. The plant and all associated pumps are housed in a 2,400 sq. ft. building. Also in the building is a water quality lab and a fire pump room. In the fire pump room is a 1,150 gpm diesel fire pump and two 120 gpm potable water "jockey" pumps.

The water is distributed via buried mains to the mine services building and fire hydrants in the areas around the intake and mine services building.



Full frame view of Mine Service Building and Office



Retention Dam

All drainage from the plant site area is coursed to a 230 acre feet capacity pond behind the retention dam. The dam is approximately 700 ft. long by 64 ft. in height. It has a clay core and is designed to be a zero discharge system.